SparkCognition Industrial AI Suite for Renewables is a cloud-based modular Asset Performance Management system for wind, solar, and storage that enables users to increase energy production, decrease maintenance costs, and improve operational efficiency.

Industrial AI Suite for Renewables is powered by SparkCognition's patented artificial intelligence (AI) and machine learning (ML) technology, deep energy domain and software expertise, and an open mindset on user enablement and flexible integrations.

SPARKCOGNITION INDUSTRIAL AI SUITE FOR RENEWABLES

Cloud-based Asset Performance Management for:

WIND	SOLAR	STORAGE

Modular toolkit to maximize profitability and operational efficiency, powered by:

DOMAIN EXPERTISE	BIG DATA	ARTIFICIAL INTELLIGENCE

Actionable insights from structured and unstructured data sources, in one central platform:

STRUCTURED DATASETS	UNSTRUCTURED DATASETS
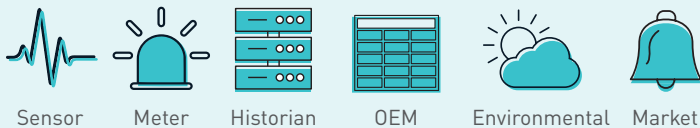
Sensor · Meter · Historian · OEM · Environmental · Market | Alerts · Logs · Manuals · Contracts · Video/Image · User Notes

INCREASE REVENUE

Catch underperformance or leading indicators of failures early and implement a fix sooner with prescriptive actions.

Renewable energy customers have increased annual energy production by up to 2% per asset.

IMPROVE PLANNING DECISIONS

Automatic quantification of energy and revenue loss, along with future production forecasts, enables efficient prioritization that ensures your resources are spent on the highest value add.

Visibility into future spare parts needs and advanced planning of crane callouts allow for batch purchasing and grouped repair scheduling—helping to avoid unnecessary costs while improving ROI.

EXPERIENCE FEWER FAILURES

Predictive analytics and anomaly detection will spot impending breakdowns that take assets offline.

With greater than 90% accuracy and predictive windows measured in days and weeks or more, Industrial AI Suite allows for corrective maintenance well in advance of potential failures.

INCREASE OPERATIONAL EFFICIENCY

Asset managers and analysts can reduce their time spent on data processing, diagnosing performance issues, and other administrative tasks by 50%.

By centralizing and standardizing the data foundation layer, all KPIs, reports, and models will be more accurate and save personnel extensive time in building, maintaining, cleaning and auditing data pipelines.

ESTABLISH DATA FOUNDATION WITH:

- Protocol agnostic data ingestion (OPC, ODBC DNP3, etc.)
- Domain-conscious automated data backfill, filtering, augmentation, and interpolation
- Central platform for structured and unstructured data from an asset or 3rd party sources
- Site and cloud-based historian

AUTOMATE KPIS WITH:

- Industry-standard KPIs
- Automated quantification of energy loss and revenue loss for all types of events
- Raw events processed into alarms with categorization into custom categories, OEM availability, GADS, and IEC classifications
- Configurable methods for multiple versions of availability, curtailment loss, reference energy, and energy loss calculations

AUTOMATE WORKFLOWS WITH:

- Scheduled standard and user-based PDF, Word, and Excel reports, including GADS and IEC reports
- Email and SMS notifications from no-code and/or bring-your-own code-based rules
- Interactive Plan of Day tool that includes site conditions, asset status, and notes
- Generative AI assistant that translates product features into conversation
- Comparisons of 3rd party reports and warranties

ANALYZE SEAMLESSLY WITH:

- Customizable dashboards for monitoring fleet, asset, and device levels
- Domain-specific visualization tools
- Templatized visualization and reports enabling efficient repeatability
- Raw, aggregated, and calculated data available through APIs and UI

DETECT ANOMALIES WITH:

- Out-of-the-box ML and physics-based performance and failure anomaly detection models
  - Wind (power curve, main bearing, generator winding, pitch system, etc.)
  - Solar (trackers, combiner boxes, inverters)
  - Storage (battery rack mismatch, battery temperature, inverters)
- Your own proprietary models leveraging Industrial AI Suite for Renewables APIs and infrastructure
- Interactive features that allow user sensitivity customization, validation, and model feedback

MAKE INFORMED PREDICTIONS WITH:

- Prescriptive actions tied to model alerts
- Forecasted energy production for wind and solar that incorporates derates and curtailments that improve maintenance planning and trading
- Forecast energy loss for ongoing downtime aiding prioritization efforts

ONE CENTRAL PLATFORM FOR ACTIONABLE INSIGHTS
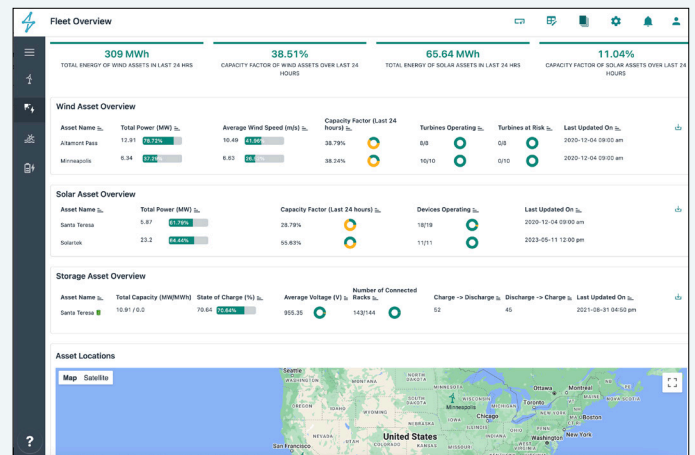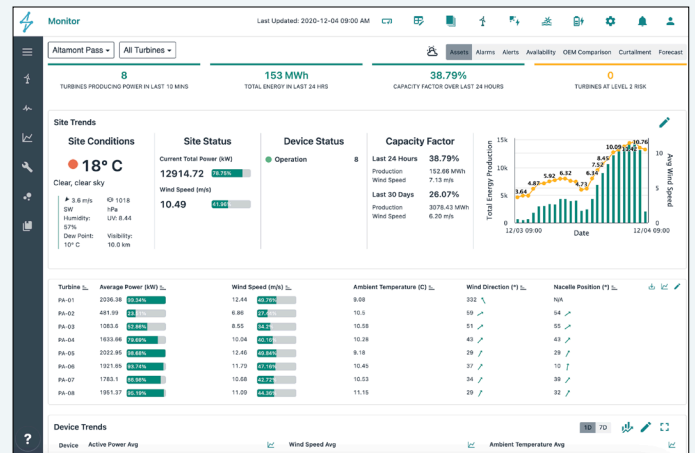
LINK KNOWLEDGE IN A CENTRAL PLACE WITH:

- Component inventory tracking
- Major component incident tracking tickets
- Ability to store documents and notes linked to system alarms, model alerts, and notifications
- Generative AI assistant that unlocks unstructured data like maintenance data, user manuals, industry documentation, user notes, and Industrial AI Suite help documentation

ABOUT SPARKCOGNITION

SparkCognition's award-winning AI solutions allow organizations to predict future outcomes, prescribe next actions, empower people, and protect assets. We partner with the world's industry leaders to analyze, optimize, and learn from all types of data, augment human intelligence, drive profitable growth, and achieve operational excellence. Our patented AI technologies include machine learning, deep neural networks, natural language processing, generative AI, and computer vision—enabling productivity, innovation, and accelerating digital transformation. Our solutions solve critical problems, prevent unexpected downtime, maximize asset performance, deliver net-zero initiatives, and proactively address safety. To learn more about how SparkCognition's AI solutions can unlock the power in your data, visit *www.sparkcognition.com.*